

Work Order ID 144515

April 19, 2016 1:21:35 PM

144515

Special Modification
for Bell 412 EPI

Page 1

Item ID: D412-761-045

Accept

N9000040100

Setup Start *NS1*

Revision ID: URF 16-533

Item Name: Bubble Window

Stop *NS2*

Start Date: 4/28/2016 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 5/31/2016 Req'd Qty: 1.00 *1*

Customer: CBELL02

Reference: CCG BELL 412 EPI

Approvals: Process Plan: SLA Date: 20160419

Tooling:

Date:

Run Start *NR1*

QC: Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	DAS 6 9-89	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr Revision Nbr

IIN D412-761

Rev E

OK TO PROCEED BY WCLWDWH D3703-3 D 144512.

DAS

22

9-89

16.04.20

MCS 160524

100

Document Control

MAY 19 2016

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D412-761-045 CHG002

DAS

27

9-89

MAY 31 2016

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

DAS

6

9-89

DAS

28

9-89

MAY 19 2016

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.03

Quality Control

DAS

27

9-89

MAY 31 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval				
Description Work Order Deviation				Disposition				Completed By			
Root Cause				FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐		No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	
OTHER : _____											

Work Order ID 144515

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144515

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Item ID: D412-761-045 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: URF 16-533 Stop ***NS2***
Item Name: Bubble Window
Start Date: 4/28/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 5/31/2016 Req'd Qty: 1.00 ***1*** Customer: CBELL02
Reference: CCG BELL 412 EPI

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Packaging					DAS 28	DAS 27		
Packaging	Memo	0.00				9-89	9-89		
Packaging	Identify and pack for shipping as per PPP D412-761-045								
	Location: _____								
	PPP Rev: <u>PPP 145853</u>								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.10							
Quality Control									

MAY 3 1 2016

MCS MAY 3 1 2016

MCS MAY 3 1 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐					

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Work Order ID: 144515

144515

Parent Item: D412-761-045

D412-761-045

Parent Item Name: Bubble Window

Start Date: 4/28/2016

Required Date: 5/31/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 09-01-13 rev.C as per dwg DD verified by:EC IPP Rev:B
13.01.15 as per ECN13-511 DD Verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
NAS43DD3-24		Purchased	No				Each	47.0000		1		6 9-89	

NAS43DD3-24

Spacer for bolt

AS
27
9-89

Location	Loc Qty	Loc Code
ST550	47	
M128454	47	

D3704-3

Manufactured No

D3704-3

Escutcheon

AS
27
9-89

Location	Loc Qty	Loc Code
ST064A	3	
112355	3	

D412-761-043.

Manufactured No

D412-761-043

Modified Latch Mechanism, LH

D3676-1
9-89

Manufactured No

D3676-1

Bubble Window, LH

AS
27
9-89

Location	Loc Qty	Loc Code
PKG	1	
134062	1	

**

**

**

**

DAS
28
9-89

DAS
6
28
9-89

MAY 19 2016

DAS
28
9-89

DAS
6
9-89

DAS
28
9-89

MAY 31 2016

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Work Order ID: 144515

144515

Parent Item: D412-761-045

D412-761-045

Parent Item Name: Bubble Window

Start Date: 4/28/2016

Required Date: 5/31/2016

Start Qty: 1.00

Required Qty: 1.00

D3678-1

Manufactured No

110

Each

5.0000

1

1

DAS
6
9-89

D3678-1

Placard

DAS
27
9-89

Location

Loc Qty

Loc Code

ST051

5

139501

5

D3678-3

Manufactured No

110

Each

5.0000

1

1

D3678-3

Placard

DAS
27
9-89

Location

Loc Qty

Loc Code

ST051

5

139556

5

D3700-1

Manufactured No

110

Each

7.0000

1

1

D3700-1

Inboard Window Doubler

DAS
27
9-89

Location

Loc Qty

Loc Code

ST051

7

112422

4

113719

2

96190

1

D3700-3

Manufactured No

110

Each

4.0000

1

1

D3700-3

Outboard Window Doubler

DAS
27
9-89

Location

Loc Qty

Loc Code

st239

4

112507

1

113793

3

DAS
28
9-89

DAS
6
9-89

DAS
28
9-89

DAS
6
9-89

DAS
28
9-89

DAS
6
9-89
SYD

MAY 19 2016

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Work Order ID: 144515

144515

Parent Item: D412-761-045

D412-761-045

Parent Item Name: Bubble Window

Start Date: 4/28/2016

Required Date: 5/31/2016

Start Qty: 1.00

Required Qty: 1.00

D3701-1 Manufactured No

110 Each 6.0000 1 1

D3701-1

Floor Doubler

**

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

st239

6

96231

6

D3702-1 Manufactured No

110 Each 5.0000 1 1

D3702-1

Fwd Doubler

**

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

st507

5

110312

3

96218

2

D3703-1 Manufactured No

110 Each 11.0000 1 1

D3703-1

Aft Doubler

**

DAS
6
88-6
28
9-89
SVO

DAS
27
9-89

Location

Loc Qty

Loc Code

ST512

11

106752

2

113680

9

D3703-3 Manufactured No

110 Each 7.0000 1 1

D3703-3

Aft Corner Doubler

**

MAY 10 2016
DAS
6
9-89
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

st239

7

107397

4

145785

3

Special Modification for
Bell 412 EPI.

USE 144512

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Page 4

Work Order ID: 144515
 Parent Item: D412-761-045
 Parent Item Name: Bubble Window

144515
D412-761-045

Start Date: 4/28/2016

Required Date: 5/31/2016

Start Qty: 1.00

Required Qty: 1.00

D3703-5
D3703-5
 Aft Cap

Manufactured No 110 Each 4.0000 1 1

**

DAS
 28
 9-89

DAS
 27
 9-89

Location Loc Qty Loc Code

ST052

4

112542

4

D3704-1
D3704-1
 Escutcheon

Manufactured No 110 Each 5.0000 1 1

**

DAS
 6
 9-89 DAS
 28
 9-89

DAS
 27
 9-89

Location Loc Qty Loc Code

ST052

1

110980

1

ST064A

4

112406

4

D3708-1
D3708-1
 Angle

Manufactured No 110 Each 5.0000 1 1

**

DAS
 6
 9-89 DAS
 28
 9-89

DAS
 27
 9-89

Location Loc Qty Loc Code

ST235

5

103523

4

105337

1

D3708-3
D3708-3
 Angle

Manufactured No 110 Each 5.0000 1 1

**

DAS
 6
 9-89 DAS
 28
 9-89

DAS
 27
 9-89

Location Loc Qty Loc Code

ST235

5

110293

1

112491

4

MAY 19 2016

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Work Order ID: 144515
 Parent Item: D412-761-045
 Parent Item Name: Bubble Window

144515
D412-761-045

Start Date: 4/28/2016 Required Date: 5/31/2016
 Start Qty: 1.00 Required Qty: 1.00

D3709-1
D3709-1
 Angle

Manufactured No 110 Each 4.0000 1 1

**

DAS 28 9-89

DAS 27 9-89

Location	Loc Qty	Loc Code
ST235	4	
115558	2	
54814	2	

MAY 19 2016

D3709-3
D3709-3
 Angle

Manufactured No 110 Each 2.0000 1 1

**

DAS 28 9-89

DAS 27 9-89

Location	Loc Qty	Loc Code
ST235	2	
112460	2	

MAY 3 2016

D3802-1
D3802-1
 Windows Seal (\$ Per Foot)

Manufactured No 110 f 73.1378 13.5 13.5

**

DAS 28 9-89

DAS 27 9-89

Location	Loc Qty	Loc Code
ST416	73.13776	
134091	0.75	
140492	3	
141991	19.38776	
143804	50	

13.50

1- Cut one per dwg d3802-1-135

DT9458
DT9458
 Cutting Template

Manufactured No 110 Each 0.0000 1 1

**

DAS 28 9-89

DAS 27 9-89

MAY 19 2016

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Work Order ID: 144515

144515

Parent Item: D412-761-045

D412-761-045

Parent Item Name: Bubble Window

Start Date: 4/28/2016

Required Date: 5/31/2016

Start Qty: 1.00

Required Qty: 1.00

AN3-7A Purchased No

110 Each 366.0000 26 26

AN3-7A

Bolt

**

DAS
27
9-89
DAS
28
9-89

DAS
27
9-89

Location Loc Qty Loc Code

over003 350

m133694 100

m134606 250

ST349 16

m132763 10

m132803 6

110 Each 2,049.000 52 52

NAS1149D0363J Purchased No

NAS1149D0363.J

Washer

**

DAS
27
9-89
DAS
28
9-89

DAS
27
9-89

Location Loc Qty Loc Code

GA 583

m134055 583

ST260a 1000

m134606 1000

ST263 466

m134370 466

110 Each 1,707.000 26 26

MS21042L3 Purchased No

MS21042L3

Nut

**

DAS
27
9-89
DAS
28
9-89

DAS
27
9-89

Location Loc Qty Loc Code

FP001 100

m133790 100

GA 782

m133790 3

m134360 779

ST304 825

m134039 12

m134360 813

MAY 1 2016

26

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Work Order ID: 144515

144515

Parent Item: D412-761-045

D412-761-045

Parent Item Name: Bubble Window

Start Date: 4/28/2016

Required Date: 5/31/2016

Start Qty: 1.00

Required Qty: 1.00

MS24694-C5

Purchased

No

110

Each

103.0000

1

1

MS24694-C5

Screw

Location

Loc Qty

Loc Code

ST285

103

106815

3

m130238

100

MS24694-C13

Purchased

No

110

Each

16.0000

1

1

MS24694-C13

Screw

Location

Loc Qty

Loc Code

ST285

16

108558

16

DAS
27
9-89

MAY 13 2016

DAS
28
9-89

DAS
28
9-89

6.0 PARTS LIST, FULL VERTICAL REFERENCE DOOR MOD KITS

QTY -041	QTY -041A	QTY -043	QTY -045	QTY -047	QTY -049	QTY -051	QTY -141	PART NUMBER	DESCRIPTION
								D412-761-011	FULL VERTICAL REFERENCE DOOR, LH
								D412-761-011A	FULL VERTICAL REFERENCE DOOR, LH
X								D412-761-041	FULL VERTICAL REFERENCE DOOR KIT, LH
	X							D412-761-041A	FULL VERTICAL REFERENCE DOOR KIT, LH
		X	1					D412-761-043	MODIFIED LATCH MECHANISM KIT, LH
1	1		X					D412-761-045	LARGE BUBBLE WINDOW KIT, LH
1	1			X				D412-761-047	DOOR MOUNTED INSTRUMENT PANEL KIT, LH
1					X			D412-761-049	ARMREST KIT, LH
	1					X		D412-761-051	ARMREST KIT, LH
							X	D412-761-141	VENT KIT
		1						D3589-041	LATCH ASSEMBLY
		1						D3589-047	FORWARD GUIDE
		1						D3589-049	AFT GUIDE
		2						MS16997-24	SCREW
		2						MS21042L06	NUT
		2						NAS1149DN632J	WASHER (OR AN960JD6L)
		1						D3676-1	LARGE BUBBLE WINDOW
		1						D3678-1	PLACARD
		1						D3678-3	PLACARD
		1						D3700-1	INBOARD WINDOW DOUBLER
		1						D3700-3	OUTBOARD WINDOW DOUBLER
		1						D3701-1	FLOOR DOUBLER
		1						D3702-1	FORWARD DOUBLER
		1						D3703-1	AFT DOUBLER
		1						D3703-3	AFT CORNER DOUBLER
		1						D3703-5	AFT CAP
		1						D3704-1	ESCUTCHEON
		1						D3704-3	ESCUTCHEON
		1						D3708-1	ANGLE
		1						D3708-3	ANGLE
		1						D3709-1	ANGLE
		1						D3709-3	ANGLE
		1						D3802-1-135	SEAL
		1						DT9458	CUTTING TEMPLATE
		26						AN3-7A	BOLT
		26						MS21042L3	NUT
		1						MS24694-C5	SCREW (OR MS24694-S5)
		1						MS24694-C13	SCREW (OR MS24694-S13)
		1						NAS43DD3-24	SPACER
		52						NAS1149D0363J	WASHER (OR AN960JD10)

(CONTINUED ON PAGE 11)

5.0 PARTS LIST, MODIFIED FULL VERTICAL REFERENCE DOOR KITS

QTY -011	QTY -011A	QTY -041	QTY -041A	QTY -043	QTY -045	QTY -047	QTY -049	QTY -051	QTY -141	PART NUMBER	DESCRIPTION
X										D412-761-011	FULL VERTICAL REFERENCE DOOR, LH
	X									D412-761-011A	FULL VERTICAL REFERENCE DOOR, LH
1		X								D412-761-041	FULL VERTICAL REFERENCE DOOR KIT, LH
	1		X							D412-761-041A	FULL VERTICAL REFERENCE DOOR KIT, LH
				X	1					D412-761-043	MODIFIED LATCH MECHANISM KIT, LH
		1	1		X					D412-761-045	LARGE BUBBLE WINDOW KIT, LH
		1	1			X				D412-761-047	DOOR MOUNTED INSTRUMENT PANEL KIT, LH
		1					X			D412-761-049	ARMREST KIT, LH
			1					X		D412-761-051	ARMREST KIT, LH
1	1								X	D412-761-141	VENT KIT
1	1									204-030-853-125 OR 204-030-853-137 OR 204-030-853-155 OR 204-030-853-153	BELL 204, 205, 210, 412 OEM DOOR

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Revision: E

Date: 12.12.07